

34. A method for obtaining data from an information processing device, comprising the steps of:

providing a first data signal to said information processing device;

displaying a state of said first data signal crossing an interface associated with said
5 information processing device using a first optical device that is associated with said information processing device;

monitoring an optical output of said first optical device;

generating an optical output-based signal from said monitoring step; and

retrieving data from said optical output-based signal from said monitoring step using a
10 computer.

35. A method, as claimed in Claim 34, wherein:

said monitoring step comprises using a telescopic optics.

36. A method, as claimed in Claim 34, wherein:

said retrieving step comprises converting said optical output to an electrical signal and
15 decoding said electrical signal.

37. A method, as claimed in Claim 36, wherein:

said converting step comprises directing said optical output to a device selected from the group consisting of one or more photodetectors, photomultipliers, phototransistors, directly by an optical sensor, means for conveying said optical output of said first optical device to an optical
20 sensor, or any combination thereof.

38. A method, as claimed in Claim 36, wherein:

said decoding step comprises providing said electrical signal to a universal synchronous-asynchronous receiver-transmitter.

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36. A method, as claimed in claim 34, wherein:
said retrieving step comprises converting said optical
output to an ~~electrical~~ ^{electrical} signal and decoding said elec-
trical signal.

37. A method, as claimed in claim 36, wherein:
said converting step comprises directing said optical
output to a device selected from the group consisting of
one or more photodetectors, photomultipliers, pho-
totransistors, directly by an optical sensor, means for
conveying said optical output of said first optical device
to an optical sensor, or any combination thereof.

38. A method, as claimed in claim 36, wherein:
said decoding step comprises providing said electrical
signal to a universal synchronous-asynchronous
receiver-transmitter.

39. A method, as claimed in claim 34, wherein:
said retrieving step comprises analyzing said optical out-
put-based signal to identify at least one of a first start
bit and a first stop bit of a first data signal that is at least
substantially replicated by said optical output.

40. A method, as claimed in claim 39, wherein:
said retrieving step further comprises identifying a unit
interval used by said first data signal based upon an
identification of at least one of said first start bit and
said first stop bit, wherein said unit interval is defined
as a time that is used to transmit one bit of information
in said first data signal.

41. A method, as claimed in claim 39, wherein:
said start bit is a 0 and said stop bit is a 1.

42. A method, as claimed in claim 39, wherein:
said first data signal is binary, wherein a start bit of said
first data signal is always a first value and a stop bit of
said first data signal is always a second value that is
different from said first value, wherein said analyzing
step further comprises:
executing a first identifying step comprising identifying
an occurrence of a change from said second value to
said first value and setting this equal to a current start
bit candidate;
executing a second identifying step after an identification
of said current start bit candidate by said executing a
first identifying step and comprising the steps of:
identifying a smallest pulse width after said current
start bit candidate that corresponds from a change
from one of said first and second values to the other
of said first and second values; and
setting said smallest pulse width as a current unit
interval;
decoding said first data signal if said first data signal has
one said stop bit a predetermined number of said unit
intervals after said current start bit candidate using said
current unit interval; and
repeating said executing a first and second identifying
steps if said first data signal does not have one said stop
bit said predetermined number of said unit intervals
after said current start bit candidate using said current
unit interval.

43. A method, as claimed in claim 42, wherein:
said predetermined number of said unit intervals is
selected from the group consisting of 7 or 8.

44. A method, as claimed in claim 34, wherein:
said optical output-based signal is indicative of a first data
signal that comprises a plurality of bytes, wherein each
said byte is preceded by a start bit and is immediately
followed by a stop bit, wherein each said start bit is of
a first magnitude and each said stop bit is of a second

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magnitude that is different from said first magnitude,
wherein said retrieving step comprises the steps of:
reviewing said optical output-based signal;
selecting a current start bit candidate from said reviewing
step;
identifying a smallest pulse width after said selecting step
that corresponds from a change from one of said first
and second values to the other of said first and second
values;
setting said smallest pulse width equal to a current unit
interval;
decoding said first data signal if said first data signal has
one said stop bit a predetermined number of said unit
intervals after said current start bit candidate; and
repeating said reviewing, selecting, identifying, setting
and decoding steps if said optical output-based signal
does not have one said stop bit said predetermined
number of said unit intervals after said current start bit
candidate.

45. A method, as claimed in claim 44, wherein:
said decoding step comprises using a universal synchro-
nous-asynchronous receiver-transmitter.

46. A method, as claimed in claim 44, further comprising
the steps of:
modifying a configuration associated with said informa-
tion processing device so that said optical output of said
first optical device is indicative of said first data signal
being transmitted to said information processing
device.

47. A method, as claimed in claim 46, wherein:
said modifying step comprises changing software used by
said information processing device.

48. A method, as claimed in claim 46, wherein:
said modifying step comprises changing hardware used
by said information processing device.

49. A method for operating a first optical device that is
associated with an information processing device, compris-
ing the steps of:
providing a first data signal to said information processing
device, wherein said first optical device displays the
state of said first data signal crossing an interface
associated with said information processing device;
operating said first optical device other than in accordance
with said first data signal; and
directing said first data signal toward said first optical
device, wherein said operating step comprises the step
of filtering said first data signal to define a second
signal that is provided to said first optical device,
wherein said filtering step comprises configuring said
second signal such that a time duration for any bit in
said second signal is at least 1.5 greater than a time
duration of any bit in said first data signal.

50. A method for operating a first optical device that is
associated with an information processing device, compris-
ing the steps of:
providing a first data signal to said information processing
device, wherein said first optical device displays the
state of said first data signal crossing an interface
associated with said information processing device;
operating said first optical device other than in accordance
with said first data signal; and

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UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 6,987,461 B2
DATED : January 17, 2006
INVENTOR(S): LOUGHRY

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 31

Line 3, delete "elcctrical" and insert therefor --electrical--.

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